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BUREAU OF AGRICULTURAL ECONOMICS
UNITED STATES DEPARTMENT OF AGRICULTURE

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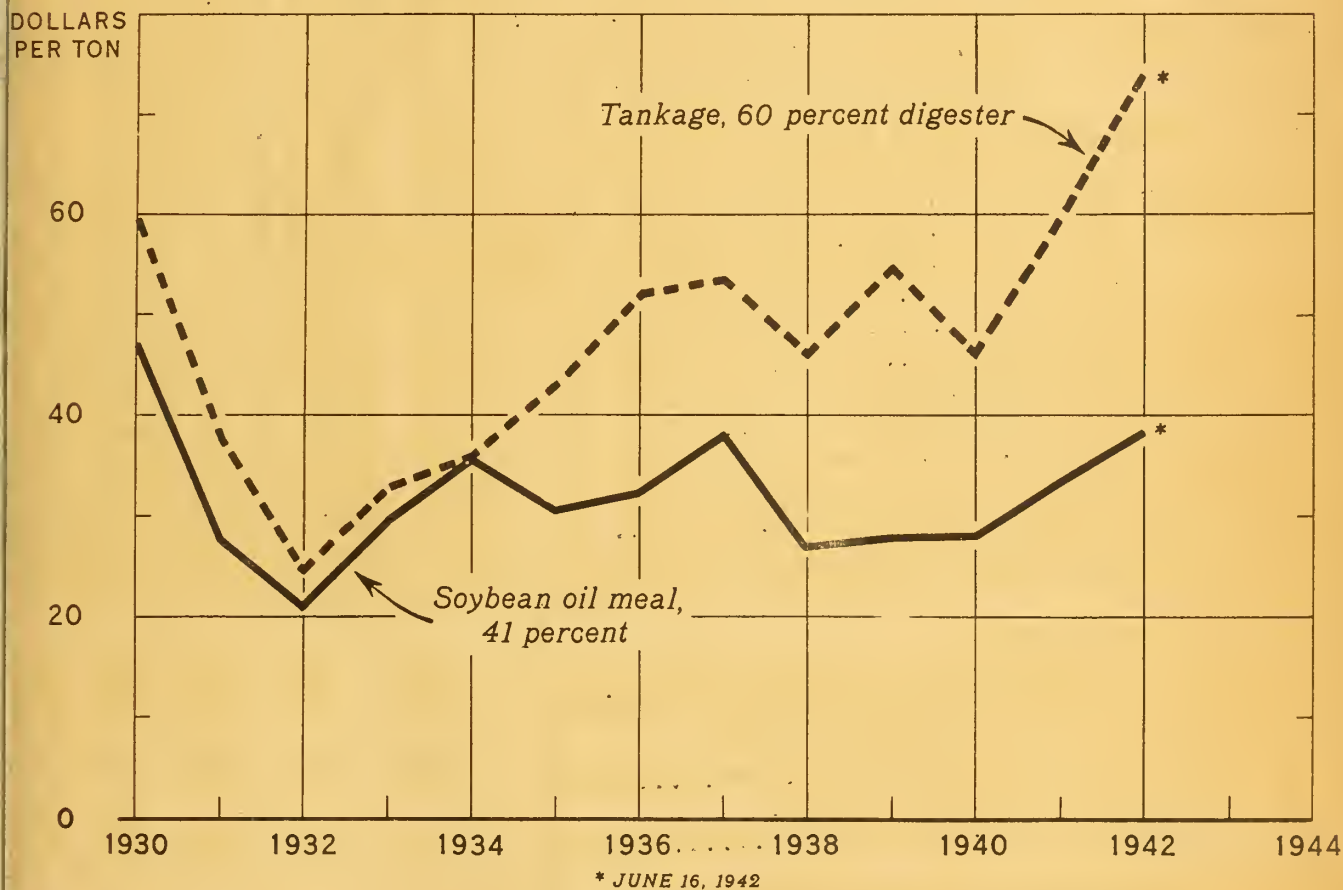
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IN THIS ISSUE:
SOYBEAN OIL MEAL FOR HOG FEEDING

WHOLESALE PRICES OF TANKAGE AND SOYBEAN OIL MEAL, CHICAGO, 1930-42



U. S. DEPARTMENT OF AGRICULTURE

NEG. 42347 BUREAU OF AGRICULTURAL ECONOMICS

CURRENT PRICES OF SOYBEAN OIL MEAL ARE LOWER THAN PRICES OF TANKAGE IN NEARLY ALL PARTS OF THE CORN BELT, AFTER ADJUSTMENT FOR THE DIFFERENCE IN FEEDING VALUES. THERE IS A STRONG DEMAND FOR ANIMAL PROTEIN FEEDS BUT SUPPLIES OF SUCH FEEDS ARE LIMITED. FARMERS WILL FIND IT DESIRABLE TO INCREASE GREATLY THE QUANTITIES OF SOYBEAN MEAL FED TO HOGS AND POULTRY THIS SUMMER AND PROBABLY IN 1942-43. (FOR DATA SEE TABLE 5.)

Table 1.- Market prices of feeds and livestock-feed price ratios,
June 1940, 1941, and April-June 1942

Item	Unit	June 1942				
		1940	1941	Apr.	May	June 1
		Cents	Cents	Cents	Cents	Cents
Grains						
Corn No. 3 Yellow, Chicago	Bu.	65.8	73.7	82.3	85.3	85.1
No. 3 Yellow, Kansas City	"	67.5	—	78.1	82.8	82.2
Oats No. 3 White, Chicago	"	35.1	37.1	55.1	55.2	49.1
No. 3 White, Minneapolis	"	32.6	33.5	51.9	50.3	46.2
Barley No. 3, Minneapolis	"	46.3	52.0	71.1	76.3	65.9
Wheat No. 2 Hd. Winter, Kansas City	"	76.3	97.3	114.6	114.9	114.0
Rye No. 2, Minneapolis	"	58.8	58.1	71.8	69.3	60.8
Soybeans, No. 3 Yellow, Chicago	" 2/	81.3	137.8	179.5	176.1	170.5
Byproduct Feeds						
Standard bran, Minneapolis	Ton	Dol. 17.40	Dol. 20.40	Dol. 37.75	Dol. 36.80	Dol. 36.00
Chicago	"	19.80	22.50	39.90	39.10	39.00
Buffalo	"	21.60	24.10	42.25	40.90	41.50
Standard middlings, Minneapolis	"	21.10	22.80	37.75	36.95	37.00
Chicago	"	23.40	25.00	39.50	38.70	39.10
Buffalo	"	22.60	24.60	39.60	40.10	41.50
Cottonseed meal, 41% protein, Chicago	"	31.05	32.40	41.80	40.50	41.25
41% protein, Memphis	"	24.90	26.50	35.25	34.30	35.25
Soybean meal, 41% protein, Chicago	"	24.40	29.70	41.00	38.30	38.25
Linseed meal, 34% protein, Minneapolis	" 3/	26.25	28.20	37.50	36.00	35.00
34% protein, Buffalo	" 3/	28.50	27.75	32.40	30.90	30.00
Peanut meal, 45% protein, S.E. milling points:	"	26.80	24.90	46.75	46.20	35.50
Copra meal, Los Angeles	"	21.70	35.80	50.00	49.95	49.50
White hominy feed, Chicago	"	23.90	29.10	31.00	32.00	34.00
Gluten feed, 23% protein, Chicago	"	18.35	20.20	26.75	26.25	27.75
Sankage, digester, 60%, Chicago	"	41.25	56.55	74.00	74.00	74.00
Meat scraps, Chicago	"	41.25	51.90	70.00	70.00	71.00
Fish meal, San Francisco	"	54.55	74.60	77.50	77.50	77.50
Brewers' dried grains, Milwaukee	"	18.00	20.50	27.10	25.60	28.00
Distillers' dried grains, Cincinnati	"	23.60	25.50	28.45	29.10	36.00
Alfalfa meal, No. 1 fine, Kansas City	"	19.90	20.30	30.80	28.65	28.40
Indexes of Feed Prices 4/						
Feed grains, United States, 1910-14 = 100		93	99	124	126	5/124
Oilseed meal, Terminal markets, 1935-39 = 100		90	97	131	126	6/125
Livestock byproduct feeds and fish meal,						
Terminal markets, 1935-39 = 100		101	135	162	162	6/162
Eleven principal high-protein feeds,						
Terminal markets, 1935-39 = 100		91	104	136	132	6/133
Indexes of Livestock-Feed Price Ratios 7/						
Egg-corn ratio, Chicago, 1920-39 = 100		66	116	141	142	8/145
Beef-corn ratio, Chicago, 1920-39 = 100		111	109	120	119	8/117
Butterfat-feed ratio, United States, 1920-39=100 :		97	127	87	100	5/101
Egg-feed ratio, United States, 1931-40 = 100		90	134	117	122	5/124

1/ Grain prices, average for week ended June 20, byproduct feed prices as of June 16.
 2/ No. 2 Yellow. 3/ 37-percent protein. 4/ For method and data for earlier months and years see issues of "The Feed Situation" for December 1941 and April 1942.
 5/ Preliminary. 6/ June 16. 7/ Average for corresponding month in base period = 100.
 Index numbers above 100 indicate that ratios are favorable to livestock producers.
 See table 1, "The Feed Situation." February 1942. 8/ Week ended June 20.

THE FEED SITUATION

Summary

Indications in early June were that the total supply of four principal feed grains in 1942-43 may be about 4 percent below the near-record 1941-42 supply. With an increase in livestock numbers in prospect, the supply of feed grains per animal unit may be about 10 percent smaller. The reduction in the supply is largely the result of an expected smaller carry-over of feed grains at the close of the 1941-42 marketing year. Prospects are generally favorable for the 1942 feed grain crops, although excessive rain in large sections of the Corn Belt delayed planting and early cultivation of the 1942 corn crop.

Over most of the country the condition of pastures in early June was the best in recent years. The total hay supply, including production plus carry-over, is expected to exceed 100 million tons. Prospects continue favorable for a record supply of oilseed cake and meal, perhaps 25 percent greater than that in the 1941-42 season.

Prices of most feeds probably will average higher in 1942-43 than in 1941-42, influenced by strong demand from livestock feeders and prospective smaller supply of feed grains per animal unit. The loan value on 1942 corn will be based on a higher parity price than last year. Loan rates recently announced for barley and grain sorghums were about 10 and 15 percent per bushel higher, respectively, than last year.

In recent weeks the price of soybean meal declined to the lowest levels since last fall. Production is unusually large, due to the crushing of soybeans for oil, and soybean meal is now a cheaper source of protein in most parts of the Corn Belt than tankage or meat scraps. Prices of tankage and

meat scraps during the coming year are expected to remain near the recently established ceilings, while the price of soybean meal may continue relatively low if the prospective large production from the 1942 crop is realized.

-- June 25, 1942

REVIEW OF RECENT DEVELOPMENTS

BACKGROUND.— During the past 5 years the growing seasons have been generally favorable for the growth of feed grains and forage crops, although in some years droughts greatly reduced yields in sections of the western Corn Belt and in other local areas. During each of the 3 marketing years beginning October 1937, corn production was much larger than disappearance and the corn carry-over, including Government-owned corn, increased to 695 million bushels on October 1, 1940 -- the largest on record. Although acreage seeded to feed grains during the past few years has been much below the long-time average, yields of feed crops were near record levels last year. Total supplies of feed grains, hay, and high-protein feeds were the largest in 20 years. Disappearance of feed grains has increased sharply since last summer and feed prices have advanced in response to rising demand.

Indicated Supplies of Feed Grains June 1

Prospects are generally favorable for feed grain production this year, although excessive rain delayed the planting of corn in fairly large areas of the Corn Belt. The oats crop was indicated on June 1 to be 1,252 million bushels - 76 million bushels larger than last year. June 1 conditions indicated a 1942 barley crop of 402 million bushels, which with the June 1 carry-over of 81 million bushels adds to 483 million bushels, the largest supply on record and 12 percent more than last year. The condition of the corn crop is fairly good, although poorer than last year, since excessive rainfall in the Corn Belt delayed planting and early cultivation of the crop. The percentage of the crop planted to hybrid seed is expected to be increased again this year.

Growth of Forage Crops and Pastures (usually Good)

The June 1 condition of both tame and wild hay was the highest since 1927. The acreage available for tame hay is the largest on record and another large hay crop is in prospect. The condition of the crop is better than last year everywhere except in some sections in the East. The June 1 condition of pastures was also generally the best in recent years. Pastures are especially good in the western Corn Belt States and in New England (see table 6).

Prices of Most Feeds Decline

Prices of oats, barley, oilseed meals, and bran have declined during the past 2 months, reflecting the favorable prospects for 1942 crops and the unusually good condition of pastures. The favorable outlook for oats and barley production in Canada also has been a weakening factor, since increased imports of these grains are expected in 1942-43 under the recent Canadian-United States wartime trade arrangement. There has been little change in corn prices during the past month. In mid-May the farm price of corn in most of the commercial area was near or above the 1941 loan rate.

Prices of oilseed meals are considerably below the maximum price ceilings based on March levels. Wheat millfeeds, animal byproduct feeds, and fish meal, however, continue near the price ceilings recently established for these feeds. Corn byproduct feeds and brewers' and distillers' dried grains advanced during the past month, with the price of corn hominy feed approaching the ceiling.

Maximum Prices of Tankage and Meat
Scraps Established by Zones

Maximum Price Regulation No. 74 has been amended by the Office of Price Administration, effective June 5, with the establishment of ceilings on digester tankage and meat scraps by zones. The amended regulation also includes ceilings on wet and dry rendered tankage, the raw materials for digester tankage, and meat scraps. Under the new regulation price ceilings are the same for all producers in each zone. Maximum prices are set in eight zones for meat scraps and in three zones for tankage, bulk, less than carload lots, f.o.b. conveyance at production point or sellers' warehouse.

Maximum prices for meat scraps are fixed on the basis of 50 percent protein content. Ceilings for meat scraps containing other than 50 percent protein are lower or higher depending on the percentage protein content.

Maximum prices, basis 50 percent protein, bulk, are as follows:

Zone 1 - California, Washington, and Oregon: \$58 per ton.

Zone 2 - Idaho, Nevada, Utah, Montana, Wyoming, and Arizona: \$62 per ton.

Zone 3 - North Dakota, South Dakota, Nebraska, Kansas, Minnesota, Iowa, and Buchanan County, Missouri: \$70 per ton.

Zone 4 - Michigan, Wisconsin, Illinois, Indiana, Ohio, Missouri (except Buchanan County), Kentucky, Oklahoma, Arkansas, Louisiana, Texas, Colorado, and New Mexico: \$68 per ton.

Zone 5 - Tennessee, Alabama, Florida, Georgia, Mississippi, and South Carolina: \$66 per ton.

Zone 6 - West Virginia, western half of Pennsylvania divided at the eastern borders of the following counties: Potter, Cameron, Clearfield, Cambria, and Somerset; and western 10 counties of New York divided by the eastern borders of the following counties: Monroe, Livingston, and Alleghany: \$65 per ton.

Zone 7 - Those portions of New York and Pennsylvania not included in Zone 6 and New Jersey, Delaware, Maryland, Virginia, and North Carolina: \$62 per ton.

Zone 8 - Maine, Vermont, New Hampshire, Massachusetts, Connecticut, and Rhode Island: \$63 per ton.

Maximum prices for tankage are fixed on the basis of 60 percent protein content. Ceilings for digester tankage of other protein content are adjusted according to percentage protein. Maximum prices in the three zones, basis 60 percent protein, bulk, are as follows:

Zone 1 - Washington, Oregon, California, Nevada, Utah, Idaho, and Arizona: \$66 per ton.

Zone 2 - All States except those listed in Zone 1 and Zone 3: \$71 per ton.

Zone 3 - Maine, Vermont, New Hampshire, Massachusetts, Connecticut, Rhode Island, New York, Pennsylvania, New Jersey, Virginia, West Virginia, Maryland, Delaware, North Carolina, and South Carolina: \$66 per ton.

Quantity of Corn Sold by the Government
and Redeemed by Farmers

About 82 million bushels of corn were sold by the Government and 59 million bushels were redeemed by farmers during the first 5 months of 1942. The total quantity of corn owned by the Government or under seal on June 1 totaled about 300 million bushels. Large quantities of 1938 and 1939 corn have been redeemed during the past 3 months, as it can be redeemed at 62 to 63 cents per bushel, much less than cash corn prices in the Corn Belt. A large part of the 1938-40 corn under seal, which totaled about 126 million bushels on June 1, probably will be redeemed before the end of 1942. About 2 million of the 109,932,000 bushels of 1941 corn sealed have been redeemed since April 1. On June 1 about 62 million bushels of corn were owned by the Commodity Credit Corporation.

Table 2.- Quantities of corn sold by the Commodity Credit Corporation and redeemed by farmers monthly, 1942

Month	Sold by		Redeemed by farmers		
	Commodity				
	Credit		1938 and 1939	1940	1941
	Corporation		corn	corn	corn
	1,000	1,000	1,000	1,000	1,000
	bushels	bushels	bushels	bushels	bushels
January	49,049	4,640	2,872	---	
February	7,479	4,487	2,192	1	
March	9,279	4,699	891	3	
April	8,247	16,934	1,554	572	
May	7,639	17,733	1,748	754	
Total	81,743	48,493	9,257	1,330	

Government Sales of Wheat for Feed
Total 32 Million Bushels

In early June about 32 million bushels of wheat had been sold for feed under the wheat-feed program. It is estimated that a little over half of this wheat was sold for feeding in the East and Northeast, about one fourth in the Pacific Northwest, and most of the rest in the Corn Belt. Since February about 2.5 million bushels of wheat have been sold for alcohol production.

Loan Rates on 1942 Barley and Grain
Sorghums Announced

Loan rates on 1942 barley and grain sorghums were recently announced by the Commodity Credit Corporation. The loan values on barley in 7 Western States, Arizona, California, Idaho, Nevada, Oregon, Washington, and Utah are 60 cents per bushel for No. 1, 59 cents for No. 2, 57 cents for No. 3, 54 cents for No. 4, and 50 cents for No. 5. The loan rate in all other States is 5 cents per bushel lower for each of these grades. Mixed barley will be discounted 2 cents per bushel.

The loan values on grain sorghum by grades will be as follows: No. 1, 55 cents per bushel, No. 2, 53 cents, No. 3, 50 cents, and No. 4, 45 cents. Mixed grain sorghums will be discounted 2 cents per bushel.

The barley loans will mature on demand, but not later than April 30, 1943. Grain sorghums loans will mature on demand, but not later than June 30, 1943. The loan period for barley will close on December 31 and for grain sorghums on January 31, 1943.

Livestock Feed Price Ratios

The seasonally adjusted butterfat-feed price ratio turned more favorable to dairymen during the past 2 months. In May and June the ratio was about the same as the 1920-39 average, after being generally below average since last October. The price of hogs at Chicago has remained near or above 14 dollars during the past month and the hog-corn price ratio continues unusually favorable to hog producers. The price of beef steers is also high in relation to corn, but the spread between feeder cattle and finished cattle is less than average, which may cause cattle feeders to market more of their cattle at lighter weights than formerly with less finish. The egg-feed price ratio, adjusted for seasonal variation, in June was more favorable than in any of the past few months.

OUTLOOK

General

Feed Supplies in 1942-43

Crop prospects in early June, together with the expected smaller carry-over of feed grains, point to a 1942-43 supply of four principal feed grains of about 125 million tons, 4 percent smaller than the near record supply last year, but 6 percent above the 1937-41 average. Livestock numbers are increasing and it is probable that the number of grain-consuming animal units on farms next January 1 may be 5 or 6 percent larger than on last January 1. In this event the domestic supply of feed grains per grain-consuming animal unit may be about 10 percent smaller than in 1941-42.

The size of the 1942 corn and grain sorghum crops will depend largely on growing conditions during the next 2 or 3 months. Production of these grains will be smaller than last year, if acreage turns out about as indicated March 1, and if yields are about the same as the 1937-41 average. The carry-over of corn next October 1 is expected to be considerably smaller than the 1941 carry-over and the total supply of corn may be about 200 million bushels smaller.

Table 3.- Feed grain supplies, United States, 1937-42

Year	Corn October 1	Oats July 1	Barley June 1	Grain sorghums production	Total supply
	Million bushels	Million bushels	Million bushels	Million bushels	Million tons
1937-41	3,061	1,289	334	112	117.5
1940	3,155	1,393	369	128	123.1
1941	3,318	1,400	429	154	129.9
1942			1/ 483		2/ 125.0

1/ Indicated June 1.

2/ Preliminary estimate.

The supply of high-protein feeds, including five principal oilseed cakes and meals and gluten feed, may be about 7,200,000 tons, 25 percent larger than the 1941-42 supply. Hay prospects are unusually favorable and the supply of hay is expected to exceed 100 million tons.

Feed Prices

Prices of feed grains and byproduct feeds will be supported by the strong demand from livestock producers in 1942-43 and the prospective smaller supply of feed per animal unit. Prices of most feeds will probably average higher in 1942-43 than during the current year. The higher loan rate in prospect for corn, as a result of the increase in the parity price of corn, may give additional support to corn prices and other feed grains. During 1942-43 prices of animal byproduct feeds and wheat millfeeds may continue near their recently established ceilings, but oilseed meals may remain below the ceilings, if 1942-43 production of these feeds is as large as now appears probable. Prices of oilseed meals are expected to be low in relation to prices of tankage, meat scraps, and fish meal, since large quantities will be produced in the record crushing for oil this year.

Demand

Demand for feed grains in 1942-43 may be the strongest in recent years. Livestock production will be greater than in 1941-42 and prices of most livestock products are expected to average higher. The price ceilings on beef may discourage the production of well-finished cattle, which would tend to reduce the quantity of corn and other grains fed to beef cattle. This will be more than offset, however, by the prospective increase in the grain requirements for hogs, dairy cattle, and poultry. Industrial utilization of corn will probably be the largest on record, principally because of the increased requirements for making industrial alcohol.

Outlook by Regions

North Atlantic States

Present indications point to larger 1942-43 supplies of locally produced feed grains and forage crops than in 1941-42. The combined production

of oats and barley was indicated June 1 to be 13 percent greater than last year, the condition of the corn crop is generally good, and the condition of hay crops and pastures is the best in recent years. Lack of rail and lake shipping facilities and the increased demand for feed in the Midwest may limit the movement of feed grains from that area, but some oats and barley may be shipped from Canada under the recent Canadian-United States wartime trade arrangement. Animal high-protein feeds are produced in surplus in the Northeast and supplies will not be limited by shipping difficulties. Linseed meal supplies are expected to continue ample for local requirements.

South Atlantic States

Supplies of feed grains for 1942-43 in the South Atlantic States may not be greatly different from supplies in this area last year, although this is dependent on growing conditions affecting the corn crop. The combined production of oats and barley was indicated June 1 to be 11 percent larger than in 1941. On June 1 the condition of pastures and hay crops was better than a year ago, but not so good as in other recent years. Supplies of high-protein feed will be the largest in recent years, since a large part of the record production of peanut meal in prospect for 1942-43 will be produced in this area.

East North Central States

The 1942-43 supplies of feed grains in the East North Central States may be a little smaller than in 1941-42, which may tend to curtail further increases in livestock production in 1943. An increase of 5 percent in corn acreage was indicated by March 1 intentions of producers, but yields may not be as high as the near-record yields last year. Carry-over of all feed grains at the close of the 1942-43 season is expected to be small. Supplies of soybean meal in this area will be large in 1942-43 and hog producers, as well as dairymen and poultrymen, may be able to feed more nearly balanced rations than in any previous year.

West North Central States

In Iowa, Minnesota, and Missouri, a comparatively tight feed situation is in prospect for 1942-43, somewhat similar to the situation in the eastern Corn Belt States. Carry-over of corn in Iowa next October 1 may be 125 million bushels smaller than on last October 1. In the western part of this section the season, so far, has been the best in recent years except that corn planting was somewhat delayed. Feed supplies probably will be larger in the western part of the Corn Belt relative to livestock numbers than in other sections of the Corn Belt. Production of oats and barley was indicated June 1 to be 8 percent larger than 1941 production. Hay supplies are expected to be large and pasture conditions are the best since 1927.

South Central States

Prospects for 1942 feed grains production are generally good in the South Central States except in Texas, where green bugs have damaged the oats and barley crops, and in sections of Alabama and Tennessee, where drought has curtailed growth of forage crops and grains. Livestock numbers are

increasing in this area and supplies of feed per animal unit may be somewhat smaller in 1942-43 than in 1941-42. Condition of pastures and prospects for hay are good to excellent in the western half of this section, but are only fair to good in large areas of the eastern half.

West

Prospects for 1942 feed grain production in the Western States are much better than last year's. Condition of pastures and forage crops is about the same as last year, but much above average. Indicated production on June 1 of oats and barley, the principal feed grains in the Western States, was 36 percent larger than 1941 production. Prices of feeds may advance relatively less in this area from 1941-42 to 1942-43 than in other sections of the country. With the outlook for small imports of copra cake and meal in 1942-43, and with a reduced production of fish meal in prospect, supplies of high-protein concentrates in this area are expected to be small in 1942-43. This reduction will be made up in part by increased shipment of soybeans to the West for crushing, and by the large production of alfalfa hay in this area.

SOYBEAN MEAL FOR HOG FEEDING

Present indications are that the quantity of protein feed required by hogs in 1942-43 will be the largest on record. The quantity of corn fed to hogs is expected to exceed 1,300 million bushels. Tankage available for hog feeding is not expected to be sufficient to balance more than one sixth of this corn. The remainder will be balanced with skim milk, soybean meal, 1/ and other proteins, or will be fed without protein supplement. If soybean meal is used as the protein supplement for one fourth of this corn, about 1.5 million tons of soybean meal (about half of the expected production in 1942-43) would be needed.

In view of the record production of soybean meal and the strong demand for available supplies of animal protein feeds in prospect for the remainder of 1942 and for 1943, hog producers have an unusual opportunity to lower feed costs and increase hog production by feeding larger quantities of soybean meal. At present soybean meal fed with a mineral mixture is a cheaper hog feed than tankage in practically all sections of the Corn Belt. The price of tankage is expected to continue at or near the recently established ceilings during the next few months and probably during 1942-43. Soybean meal prices, on the other hand, are expected to remain comparatively low and supplies will be much larger than will be utilized by dairymen, poultrymen, and cattle feeders, even with the increased utilization in prospect by such feeders.

Soybean Meal and Tankage Compared

Most tankage is marketed as 60 percent digester tankage. This contains on an average about 61 percent total protein and about 56 percent digestible protein. Soybean meal averages about 37 percent digestible protein, or about two thirds as much as tankage. Soybean meal contains about 30 percent carbohydrates, tankage only 2 or 3 percent. For each 100 pounds of soybean 1/ Frequently referred to as soybean oilmeal.

meal fed, about 30 to 35 pounds less corn is required than when the ration is supplemented with tankage. Tankage is higher in mineral content than soybean meal, however, and about 5 or 6 pounds more mineral is required per 100 pounds of supplement when soybean meal is used in place of tankage. Only well-cooked soybean meal provides an adequate substitute for tankage in hog feeding. Raw soybeans or partially cooked soybean meal are much less desirable. Soybeans fed whole tend to produce soft pork, but this is not the case with soybean meal, since most of the oil has been expressed or extracted. In shifting from animal protein feed to soybean meal feeders should change their rations slowly and in accordance with recommended feeding practices.

Soybean Meal as a Hog Feed

During the past several years a number of experiments have been made comparing soybean meal with tankage as a hog feed. When fed in a mixture with tankage and alfalfa meal, or when fed as the only protein supplement with an additional amount of mineral, these experiments show that soybean meal compares very favorably with tankage for hogs over 75 pounds. A larger quantity of soybean meal is required in the ration to offset the lower protein content, but on the other hand soybean meal replaces some corn. The results of experiments made in Iowa, Indiana, and Ohio show that on the average, 100 pounds of soybean meal is equal in value to 50 pounds of tankage, plus 31 pounds of corn, and minus 3 pounds of mineral mixture. ^{1/} Thus an increase in the price of corn as well as an increase in the price of tankage favors the substitution of soybean meal for tankage.

The table which follows has been set up to show the approximate prices that can be paid for 100 pounds of soybean meal, to supplement corn for feeding hogs on pasture, at varying prices of tankage and corn. For example, when the price of tankage is 4 dollars per 100 pounds and corn is 80 cents per bushel, soybean meal is worth \$2.35 per 100 pounds as a substitute for tankage. The price of soybean meal is computed from the above formula, and, therefore, takes into consideration the cost of the additional mineral required. For hogs pastured on alfalfa, the value of the soybean meal would be increased relative to tankage, since less mineral would be required.

^{1/} "Feeds and Feeding," by F. P. Morrison.

Table 4.- Equivalent price of soybean meal for feeding hogs, at varying prices of tankage and corn ^{1/}

Tankage, dollars per 100 pounds :	Corn, cents per bushel										
	50	55	60	65	70	75	80	85	90	95	100
	Soybean meal, per 100 pounds										
	Dol.	Dol.	Dol.	Dol.	Dol.	Dol.	Dol.	Dol.	Dol.	Dol.	Dol.
1.50	0.94	0.96	0.99	1.02	1.05	1.08	1.10	1.13	1.16	1.19	1.21
1.75	1.07	1.09	1.12	1.15	1.18	1.21	1.23	1.26	1.29	1.32	1.34
2.00	1.19	1.21	1.24	1.27	1.30	1.33	1.35	1.38	1.41	1.44	1.46
2.25	1.31	1.33	1.37	1.39	1.42	1.45	1.47	1.50	1.53	1.56	1.58
2.50	1.44	1.46	1.49	1.52	1.55	1.58	1.60	1.63	1.66	1.69	1.71
2.75	1.56	1.59	1.62	1.65	1.68	1.71	1.73	1.76	1.79	1.82	1.84
3.00	1.69	1.71	1.74	1.77	1.80	1.83	1.85	1.88	1.91	1.94	1.96
3.25	1.81	1.83	1.86	1.89	1.92	1.95	1.97	2.00	2.03	2.06	2.08
3.50	1.94	1.96	1.99	2.02	2.05	2.08	2.10	2.13	2.16	2.19	2.21
3.75	2.07	2.09	2.12	2.15	2.18	2.21	2.23	2.26	2.29	2.32	2.34
4.00	2.19	2.21	2.24	2.27	2.30	2.33	2.35	2.38	2.41	2.44	2.46
4.25	2.31	2.33	2.36	2.39	2.42	2.45	2.47	2.50	2.53	2.56	2.58
4.50	2.44	2.46	2.49	2.52	2.55	2.58	2.60	2.63	2.66	2.69	2.71
4.75	2.57	2.59	2.62	2.65	2.68	2.71	2.73	2.76	2.79	2.82	2.84
5.00	2.69	2.71	2.74	2.77	2.80	2.83	2.85	2.88	2.91	2.94	2.96

^{1/} The equivalent price of soybean meal is adjusted to allow for the cost of the additional quantity of mineral required.

Current Price of Soybean Meal Low Relative to Tankage

Soybean meal has been cheaper than tankage at Chicago during most of the past 5 years as compared to the 1930-35 period when soybean meal was relatively high. In recent years increased quantities of soybean meal have been included in hog and poultry rations. Many farmers have made it a common practice to use mixtures of tankage, soybean meal, and alfalfa meal for both hogs and poultry.

Since January soybean meal prices in the Corn Belt declined \$8 to \$10 per ton. With production of soybean meal the largest on record and with the condition of pastures unusually good, the wholesale price of soybean meal in early June reached the lowest level since last July and prices are now considerably below the ceiling recently established by the Office of Price Administration. Tankage, on the other hand, is at the ceiling, which is about \$71 per ton, bulk, or about \$74 per ton, bagged, wholesale, at mid-western terminal markets. With tankage at this price farmers could afford to pay about \$45 per ton for soybean meal or about \$6 per ton more than the mid-June wholesale price of soybean meal at most terminal markets in the Corn Belt.

Table 5.- Wholesale prices of soybean meal and tankage per ton, at Chicago, and differences adjusted for feeding value, 1930-42

Calendar year	Tankage, 60 percent digester, bagged	Soybean meal, 41 percent protein, bagged	Equivalent price of soybean meal ^{1/}	Difference between actual price of soybean meal and the equivalent price
	Dollars per ton	Dollars per ton	Dollars	Dollars
1930	59.45	47.05	36.91	10.14
1931	37.80	27.55	23.24	4.31
1932	24.30	20.90	14.54	6.36
1933	32.05	29.35	19.26	10.09
1934	35.65	35.50	24.00	11.50
1935	42.35	30.55	29.41	1.14
1936	51.70	32.30	34.04	- 1.74
1937	53.30	37.95	36.95	1.00
1938	46.20	26.70	27.95	- 1.25
1939	54.65	27.70	31.51	- 3.81
1940	46.10	28.05	28.61	- .56
1941	59.50	33.30	36.02	- 2.72
1942 ^{2/}	74.00	38.25	44.80	- 6.55

^{1/} The price that could be paid for 1 ton of soybean meal that would be roughly equivalent to the average price of tankage after adjusting for differences in feeding value. This price was computed by taking the price of one half ton of tankage, adding the value of 11 bushels of corn, and subtracting the value of 60 pounds of mineral mixture.

^{2/} June 16, 1942.

Table 6.- Oats, barley, and hay: Supply and distribution in the United States, average 1937-41, annual 1940-42

Year beginning	Carry-over			Pro-	Total	Net	Domestic
	Farm	Commer-	Total	duction	supply	exports	disappear-
	1,000	cial					ance
	bushels	bushels	bushels	bushels	bushels	bushels	bushels
July 1				OATS		1/	
Average							
1937-41	167,094	4,303	171,402	1,117,628	1,289,030	2/ 3/ -431	3/ 1,069,986
1940	143,488	3,150	146,618	1,245,050	1,392,662	2/ -2,964	1,177,678
1941	220,048	3,906	223,954	1,175,107	1,400,061		
1942				1,252,330			
June 1				BARLEY		4/	
Average							
1937-41	44,161	6,080	50,241	283,383	333,624	3/ 4,766	268,674
1940	50,024	8,809	58,833	310,103	368,941	2/ -542	299,142
1941	65,615	4,726	70,341	353,709	429,050		5/ 348,249
1942	76,260	4,541	80,801	401,843	482,644		
				HAY		6/	
			1,000	1,000	1,000	1,000	1,000
May 1			tons	tons	tons	tons	tons
Average							
1937-41			11,796	89,584	101,380	2/ 3/ -6	88,548
1940			10,953	94,541	105,494	2/ -22	92,566
1941			12,950	94,107	107,057		5/ 95,798
1942			11,259				

1/ Oats, including oatmeal. 2/ Net imports.

3/ Average 1937-40.

4/ Includes barley, barley flour, and malt.

5/ Total disappearance.

6/ Year beginning July 1.

Table 7.- Production and stocks of specified byproduct feeds, May 1940 and 1941, and March-May 1942

Item	May		1942	
	1940	1941	Mar.	Apr. : May
	1,000	1,000	1,000	1,000 1,000
	tons	tons	tons	tons tons
Production				
Cottonseed cake and meal:	47.2	84.3	139.7	97.2 62.4
Peanut cake and meal ...:	5.5	13.3	1.3	2.0 1.5
Gluten feed and meal ...:	56.1	69.6	85.0	82.9 77.3
Brewers' dried grains ...:	10.2	11.6	11.9	13.3 14.6
Distillers' dried grains:	16.8	17.3	29.2	31.7 32.2
Wheat millfeeds	356.9	358.1	348.9	340.0
Stocks, end of month				
Cottonseed cake and meal:	129.2	254.7	338.7	311.4 286.8
Peanut cake and meal :	8.1	23.8	4.7	4.0 3.4

Table 8.- Pasture: Condition on June 1, United States, by sections, 1932-42

Section and State	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942
	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.
North Atlantic	77.2	85.7	66.5	72.5	79.6	87.2	87.2	77.2	88.7	65.6	91.9
South Atlantic	76.4	81.4	72.3	83.5	52.5	82.4	83.4	73.5	73.3	51.6	77.9
Ohio	72	89	51	78	80	85	87	71	84	67	90
Indiana	76	88	50	87	78	87	89	76	89	73	89
Illinois	71	88	43	83	79	84	89	85	85	86	90
Michigan	87	90	58	79	81	87	87	82	88	85	87
Wisconsin	78	86	42	85	88	83	89	76	83	87	93
East North Central	75.7	88.3	49.4	82.0	80.8	85.1	88.2	78.0	85.5	78.9	89.8
Minnesota	88	80	26	80	88	86	88	70	79	88	88
Iowa	86	86	28	82	85	89	93	68	84	80	92
Missouri	55	88	48	87	72	85	87	85	80	72	94
North Dakota	79	77	15	56	52	52	76	54	85	91	92
South Dakota	89	84	8	70	62	61	80	48	76	81	93
Nebraska	81	83	33	71	77	57	75	64	61	78	89
Kansas	75	77	52	49	75	51	72	67	76	86	91
West North Central	78.2	83.0	33.4	72.6	76.0	71.4	82.7	67.5	76.8	80.8	91.4
South Central	73.5	77.4	67.8	77.9	68.9	68.8	82.6	73.7	75.5	81.3	83.4
Western	85.0	72.8	61.5	82.1	78.0	70.8	86.4	72.0	87.8	92.3	90.2
United States	77.6	81.5	53.2	77.7	74.5	75.7	84.7	72.8	80.7	78.7	88.4

Table 9.- Prices of specified feeds per 100 pounds, June, average 1931-40, 1940, and 1941, April-June 1942, and June 1942 as a percentage of average

Item	June			1942			
	Aver-			June 1942 as			
	age	1940	1941	Apr.	May	June	a percentage
	1931-40					1/	of 1931-40 average
	Dol.	Dol.	Dol.	Dol.	Dol.	Dol.	Pct.
<u>Grains</u>							
Corn, No. 3 Yellow, Chicago	1.13	1.18	1.32	1.47	1.52	1.52	135
Oats, No. 3 White, Chicago	1.04	1.10	1.16	1.72	1.72	1.53	147
Barley, No. 3, Minneapolis	1.13	.96	1.08	1.48	1.59	1.37	121
Wheat, No. 2, Hard Winter, Kansas City ..	1.34	1.27	1.62	1.91	1.92	1.90	142
Rye, No. 2, Minneapolis	.99	.80	1.01	1.28	1.24	1.09	110
<u>Byproduct feeds</u>							
Bran, Standard, Chicago	.93	.99	1.12	2.00	1.96	1.95	210
Middlings, Standard, Chicago	1.09	1.17	1.25	1.98	1.94	1.96	180
Gluten feed, 23 percent, Chicago	1.02	.92	1.01	1.34	1.31	1.39	136
Hominy feed, White, Chicago	1.14	1.20	1.46	1.55	1.60	1.70	149
Cottonseed meal, 41 percent, Chicago ..	1.41	1.55	1.62	2.09	2.02	2.06	146
Soybean meal, 41 percent, Chicago	1.41	1.22	1.48	2.05	1.92	1.91	135
Linseed meal, 2/ Minneapolis	1.54	1.31	1.41	1.88	1.80	1.75	114
Tankage, digester, 60 percent, Chicago ..	1.95	2.06	2.83	3.70	3.70	3.70	190
Brewers' dried grains, Milwaukee	.80	.90	1.02	1.36	1.28	1.40	175
Distillers' dried grains, Cincinnati ..	---	1.18	1.28	1.42	1.45	1.80	---

✓ Grains, average for week ended June 20, byproduct feeds as of June 16. 2/ 54 percent protein in 1931-32, 1937, and 1942; 37 percent protein in 1933-36 and 1938-41.

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